

ABSTRACT OF THE DISCLOSURE

A method of fabricating a semiconductor device that includes dual spacers is provided. A nitrogen atmosphere may be created and maintained in a reaction chamber by supplying a nitrogen source gas. A silicon source gas and an oxygen source gas may then be supplied to the reaction chamber to deposit a silicon oxide layer on a semiconductor substrate, which may include a conductive material layer. A silicon nitride layer may then be formed on the silicon oxide layer by performing a general CVD process. Next, the silicon nitride layer may be etched until the silicon oxide layer is exposed. Because of the difference in etching selectivity between silicon nitride and silicon oxide, portions of the silicon nitride layer may remain on sidewalls of the conductive material layer. As a result, dual spacers formed of a silicon oxide layer and a silicon nitride layer may be formed on the sidewalls.